

21437
Ser. No.
09/529, 043

SEQUENCE LISTING

<110> Forschungszentrum Juelich GmbH

<120> Method for microbial production of amino acids of the aspartate and/or glutamate family and agents which can be used in said method

<130> 1

<140> 09/529, 043

<141> 2000-04-03

<150> PCT/EP98/06210

<151> 1998-09-30

<160> 4

<170> PatentIn Ver. 2.1

<210> 1

<211> 3728

<212> DNA

<213> Corynebacterium glutamicum

<220>

<221> CDS

<222> (165)..(3587)

<223> pyruvate carboxylase

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aataattac tcta gtg tcg act cac 176

ctatcacccct tggcggtctc ttgttcaaag gaataattac tcta gtg tcg act cac

Val Ser Thr His

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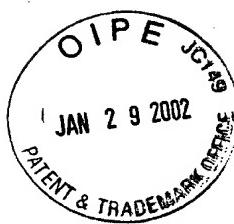
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25 30 35

gcc acg gta gct att tac ccc cgt gaa gat cggt gga tca ttc cac cgc 320



Ala Thr Val Ala Ile Tyr Pro Arg Glu Asp Arg Gly Ser Phe His Arg
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 Ser Phe Ala Ser Glu Ala Val Arg Ile Gly Thr Glu Gly Ser Pro Val
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 Lys Ala Tyr Leu Asp Ile Asp Glu Ile Gly Ala Ala Lys Lys Val
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 Lys Ala Asp Ala Ile Tyr Pro Gly Tyr Gly Phe Leu Ser Glu Asn Ala
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 Gln Leu Ala Arg Glu Cys Ala Glu Asn Gly Ile Thr Phe Ile Gly Pro
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 Thr Pro Glu Val Leu Asp Leu Thr Gly Asp Lys Ser Arg Ala Val Thr
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 gcc gcg aag aag gct ctg cca gtt ttg gcg gaa tcc acc ccg agc 608
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 Val Ala Ser Pro Asp Glu Leu Arg Lys Leu Ala Thr Glu Ala Ser Arg
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Gly Glu Val Val His Leu Tyr Glu Arg Asp Cys Ser Leu Gln Arg Arg
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 His Gln Lys Val Val Glu Ile Ala Pro Ala Gln His Leu Asp Pro Glu
 245 250 255 260
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 Leu Arg Asp Arg Ile Cys Ala Asp Ala Val Lys Phe Cys Arg Ser Ile
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Phe Ile Ala Asp His Pro His Leu Leu Gln Ala Pro Pro Ala Asp Asp			
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Lys Gln Leu Gly Pro Ala Ala Phe Ala Arg Asp Leu Arg Glu Gln Asp			
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Arg Leu Asp Glu Leu Arg Glu Ala Met Pro Asn Val Asn Ile Gln Met			
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Ser	Gly	Thr	Ser	Gln	Pro	Ser	Leu	Ser	Ala	Ile	Val	Ala	Ala	Phe			
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Met Leu Gly Arg Pro Thr Lys Val Thr Pro Ser Ser Lys Val Val Gly			
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Arg Thr Arg Ala Leu Glu Gly Arg Ser Glu Gly Lys Ala Pro Leu Thr			
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Glu Val Pro Glu Glu Glu Gln Ala His Leu Asp Ala Asp Asp Ser Lys			
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Ser Phe His Arg Ser Phe Ala Ser Glu Ala Val Arg Ile Gly Thr Glu
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Gly Ser Pro Val Lys Ala Tyr Leu Asp Ile Asp Glu Ile Ile Gly Ala
65 70 75 80
Ala Lys Lys Val Lys Ala Asp Ala Ile Tyr Pro Gly Tyr Gly Phe Leu
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Ser Glu Asn Ala Gln Leu Ala Arg Glu Cys Ala Glu Asn Gly Ile Thr
100 105 110
Phe Ile Gly Pro Thr Pro Glu Val Leu Asp Leu Thr Gly Asp Lys Ser
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Ser Thr Pro Ser Lys Asn Ile Asp Glu Ile Val Lys Ser Ala Glu Gly
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Gln Thr Tyr Pro Ile Phe Val Lys Ala Val Ala Gly Gly Gly Arg
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Gly Met Arg Phe Val Ala Ser Pro Asp Glu Leu Arg Lys Leu Ala Thr
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Glu Ala Ser Arg Glu Ala Glu Ala Ala Phe Gly Asp Gly Ala Val Tyr
195 200 205
Val Glu Arg Ala Val Ile Asn Pro Gln His Ile Glu Val Gln Ile Leu
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Gly Asp His Thr Gly Glu Val Val His Leu Tyr Glu Arg Asp Cys Ser
225 230 235 240
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Val Glu His Thr Val Thr Glu Glu Val Thr Glu Val Asp Leu Val Lys
305 310 315 320
Ala Gln Met Arg Leu Ala Ala Gly Ala Thr Leu Lys Glu Leu Gly Leu
325 330 335
Thr Gln Asp Lys Ile Lys Thr His Gly Ala Ala Leu Gln Cys Arg Ile
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Thr Thr Glu Asp Pro Asn Asn Gly Phe Arg Pro Asp Thr Gly Thr Ile
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Thr Ala Tyr Arg Ser Pro Gly Gly Ala Gly Val Arg Leu Asp Gly Ala

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Gln Arg Ala Leu Ala Glu Phe Thr Val Ser Gly Val Ala Thr Asn Ile		
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Asn Ile Gln Met Leu Leu Arg Gly Arg Asn Thr Val Gly Tyr Thr Pro		
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785	790	795
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His Glu Ile Pro Gly Gly	Gln Leu Ser Asn	Leu Arg Ala Gln Ala Thr
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885	890	895
Pro Ala Asp Phe Ala Ala Asp	Pro Gln Lys Tyr Asp	Ile Pro Asp Ser
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Val Ile Ala Phe Leu Arg	Gly Glu Leu Gly	Asn Pro Pro Gly Gly Trp
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Pro Glu Pro Leu Arg Thr	Arg Ala Leu Glu	Gly Arg Ser Glu Gly Lys
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Ala Pro Leu Thr Glu Val	Pro Glu Glu Gln	Ala His Leu Asp Ala
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Asp Asp Ser Lys Glu Arg	Arg Asn Ser	Leu Asn Arg Leu Leu Phe Pro
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Ser Ala Leu Asp Asp Arg	Glu Phe Phe	Tyr Gly Leu Val Glu Gly Arg
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<223> Description of Artificial Sequence: PCR primer

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